Serial No. 10/663.279

Attorney Docket No. 400.219US01

Title: RUNTIME FLASH DEVICE DETECTION AND CONFIGURATION FOR FLASH DATA MANAGEMENT SOFTWARE

IN THE CLAIMS

- (Currently Amended) A method of operating a memory device driver comprising: querying at least one memory device to discover the memory type by reading a memory ID code stored in the memory device; and configuring the driver to access the at least one memory device according to the
 - configuring the driver to access the at least one memory device according to the discovered memory type.
- (Currently Amended) The method of claim 1, wherein querying at least one memory
 device to discover the memory type by reading a memory ID code stored in the memory
 device further comprises querying at least one Flash memory device to discover the
 memory type.
- (original) The method of claim 2, wherein the at least one Flash memory device is one of a NOR Flash and a NAND Flash.
- (original) The method of claim 2, wherein querying at least one memory device to discover the memory type further comprises writing to an address of the memory device and reading a response from the address.
- (original) The method of claim 2, wherein querying at least one memory device to discover the memory type further comprises querying a common Flash interface (CFI) of the memory device.
- (original) The method of claim 2, wherein querying at least one memory device to discover the memory type further comprises querying a protection register of the memory device.
- (Currently Amended) The method of claim 1, wherein querying at least one memory device to discover the memory type by reading a memory ID code stored in the memory

Serial No. 10/663,279

device further comprises querying an addressable memory ID stored in the memory device.

- (Currently Amended) The method of claim 1, wherein querying at least one memory
 device to discover the memory type by reading a memory ID code stored in the memory
 device further comprises querying an architecture feature of the memory device.
- (original) The method of claim 1, wherein the driver contains at least one of a low level driver, a data manager, and a file manager.
- 10. (original) The method of claim 1, wherein configuring the driver to access the at least one memory device according to the discovered memory type further comprises configuring the driver to access the at least one memory device with low level driver operation parameters and memory device command sequences to match the discovered memory type.
- (Currently Amended) A method of operating a memory device driver comprising: querying at least one memory device to discover the memory type; and configuring the driver to access the at least one memory device according to the discovered memory type;
 - The method of claim 1, wherein configuring the driver to access the at least one memory device according to the discovered memory type further comprises configuring the driver to access the at least one memory device with data manager parameters and procedures to match the discovered memory type.
- (Currently Amended) A method of operating a memory device driver comprising: querying at least one memory device to discover the memory type; and configuring the driver to access the at least one memory device according to the discovered memory type;

Title: RUNTIME FLASH DEVICE DETECTION AND CONFIGURATION FOR FLASH DATA

MANAGEMENT SOFTWARE

The method of claim 1, wherein configuring the driver to access the at least one memory device according to the discovered memory type further comprises configuring the driver to access the at least one memory device with file manager parameters and procedures to match the discovered memory type.

- 13. (Currently Amended) A method of operating a memory device driver comprising: querying at least one memory device to discover the memory type; and configuring the driver to access the at least one memory device according to the discovered memory type:
 - The method of elaim 1, wherein configuring the driver to access the at least one memory device according to the discovered memory type further comprises configuring the driver to access the at least one memory device by matching the discovered memory type to an entry in a table and loading parameters from the table entry that matches the discovered memory type.
- 14. (original) The method of claim 13, wherein the table contains at least one of a low level driver configuration, a data manager configuration, and a file manager configuration.
- 15. (original) The method of claim 13, wherein the table contains one or more entries for a selected memory type, where each of the one or more entries contains a different access data model.
- 16. (original) The method of claim 13, wherein the table is modifiable to update the entries of memory types and parameters.
- (Currently Amended) A method of operating a system comprising:
 querying at least one Flash memory device coupled to a host to discover the memory type
 <u>by reading a device ID and/or manufacturer code stored in the Flash memory device;</u>
 and

Serial No. 10/663.279

configuring a driver routine executing on the host to access the at least one Flash memory device according to the discovered memory type.

- 18. (original) The method of claim 17, wherein the at least one Flash memory device is one of a NOR Flash and a NAND Flash.
- 19. (original) The method of claim 17, wherein an interface to the Flash memory device is one of a PCMCIA-ATA, a Compact Flash (CF), a USB Flash, MemoryStick, and a multimedia card (MMC) compatible interface.
- 20. (Currently Amended) The method of claim 17, wherein querying at least one Flash memory device coupled to a host to discover the memory type by reading a device ID and/or manufacturer code stored in the Flash memory device further comprises querving a protection register of the Flash memory device.
- 21. (Currently Amended) The method of claim 17, querying at least one Flash memory device coupled to a host to discover the memory type by reading a device ID and/or manufacturer code stored in the Flash memory device further comprises querying a memory ID stored in the Flash memory device.
- 22. (Currently Amended) The method of claim 17, wherein querying at least one Flash memory device coupled to a host to discover the memory type by reading a device ID and/or manufacturer code stored in the Flash memory device further comprises querying a common Flash interface (CFI) of the Flash memory device.
- 23. (Currently Amended) The method of claim 17, wherein querying at least one Flash memory device coupled to a host to discover the memory type by reading a device ID and/or manufacturer code stored in the Flash memory device further comprises issuing a Flash command to an address and reading the result from the address.

MANAGEMENT SOFTWARE

Serial No. 10/663,279

- 24. (original) The method of claim 17, wherein configuring a driver routine executing on the host to access the at least one Flash memory device according to the discovered memory type further comprises configuring the driver routine to access the at least one Flash memory device with operation parameters and memory device command sequences to match the discovered memory type.
- (Currently Amended) <u>A method of operating a system comprising:</u>
 <u>querying at least one Flash memory device coupled to a host to discover the memory type;</u>
 - configuring a driver routine executing on the host to access the at least one Flash memory device according to the discovered memory type; and
 - The method of claim 17, configuring a driver routine executing on the host to access the at least one Flash memory device according to the discovered memory type further comprises configuring the driver routine to access the at least one Flash memory device with memory management routines to match the discovered memory type.
- (Currently Amended) <u>A method of operating a system comprising:</u>
 querying at least one Flash memory device coupled to a host to discover the memory
 type;
 - configuring a driver routine executing on the host to access the at least one Flash memory device according to the discovered memory type; and
 - The method of claim 17, configuring a driver routine executing on the host to access the at least one Flash memory device according to the discovered memory type further eemprises configuring the driver routine to access the at least one Flash memory device by loading parameters from an entry in a table that matches the discovered memory type.
- (original) The method of claim 26, wherein the table is modifiable to update the entries of memory types and parameters.

Serial No. 10/663.279

MANAGEMENT SOFT WARE

 (original) The method of claim 17, wherein the host is one of a processor and an external memory controller.

- 29. (Currently Amended) A method of configuring a driver comprising: querying at least one Flash memory device to read a device ID and/or manufacturer code stored in the Flash memory device to discover the memory type; and configuring the driver to access the at least one memory device according to the discovered memory type.
- (original) The method of claim 29, wherein the at least one Flash memory device is one
 of a NOR Flash and a NAND Flash.
- (original) The method of claim 29, wherein an interface to the Flash memory device is
 one of a PCMCIA-ATA, a Compact Flash (CF), a USB Flash, MemoryStick, and a
 multimedia card (MMC) compatible interface.
- 32. (Currently Amended) The method of claim 29, wherein querying at least one Flash memory device to read a device ID and/or manufacturer code stored in the Flash memory device to discover the memory type further comprises querying a protection register of the Flash memory device.
- 33. (Currently Amended) The method of claim 29, wherein querying at least one Flash memory device to read a device ID and/or manufacturer code stored in the Flash memory device to discover the memory type further comprises querying a common Flash interface (CFI) of the Flash memory device.
- 34. (Currently Amended) The method of claim 29, wherein querying at least one Flash memory device to read a device ID and/or manufacturer code stored in the Flash memory device to discover the memory type further comprises writing to an address of the Flash memory device and reading a result on the address.

MANAGEMENT SOFTWARE

 (original) The method of claim 29, wherein the driver contains at least one of a low level driver, a data manager, and a file manager.

- (Currently Amended) A method of configuring a driver comprising:
 querying at least one Flash memory device to discover the memory type;
 configuring the driver to access the at least one memory device according to the
 discovered memory type; and
 - The method of claim 29, wherein configuring the driver to access the at least one Flash memory device according to the discovered memory type further comprises configuring the driver to access the at least one Flash memory device by matching the discovered memory type to an entry in a table and loading parameters from the table entry that matches the discovered memory type.
- (original) The method of claim 36, wherein the table contains at least one of a low level driver configuration, a data manager configuration, and a file manager configuration.
- 38. (original) The method of claim 36, wherein the table contains one or more entries for a selected memory type, where each of the one or more entries contains a different access data model.
- (original) The method of claim 36, wherein an access data model for the at least one Flash memory is selected from the table.
- (Currently Amended) A system comprising:
 at least one Flash memory device; and
 - a host coupled to the at least one Flash memory device, wherein the host is adapted to query the at least one Flash memory device to read a device ID and/or manufacturer code stored in the Flash memory device and configure a driver routine to access the at least one Flash memory device in response to the query.

Attorney Docket No. 400.219US01

Title: RUNTIME FLASH DEVICE DETECTION AND CONFIGURATION FOR FLASH DATA

MANAGEMENT SOFTWARE

 (original) The system of claim 40, wherein the at least one Flash memory device is one of a NAND Flash and a NOR Flash.

- 42. (original) The system of claim 40, wherein an interface to the Flash memory device is one of a PCMCIA-ATA, a Compact Flash (CF), a USB Flash, MemoryStick, and a multimedia card (MMC) compatible interface.
- (original) The system of claim 40, wherein the host is one of a processor and an external memory controller.
- 44. (original) The system of claim 40, wherein the host is adapted to query a protection register of the Flash memory device.
- (Currently Amended) The system of claim 40, wherein the host is adapted to query a memory ID stored at a specific address in the Flash memory device.
- (original) The system of claim 40, wherein the host is adapted to query a common Flash interface (CFI) of the Flash memory device.
- (original) The system of claim 40, wherein the host is adapted to query an address of the Flash memory device.
- 48. (Currently Amended) A machine-usable medium, the machine-usable medium containing a software routine for causing a processor to execute a method, wherein the method comprises:
 - querying at least one Flash memory device to read a device ID and/or manufacturer code
 stored in the Flash memory device to discover the memory type; and
 configuring a driver to access the at least one Flash memory device according to the

discovered memory type.

MANAGEMENT SOFTWARE

- 49. (original) The machine-usable medium of claim 48, wherein an interface to the at least one Flash memory device is one of a PCMCIA-ATA, a Compact Flash (CF), a USB Flash, MemoryStick, and a multimedia card (MMC) compatible interface.
- 50. (Currently Amended) The machine-usable medium of claim 48, wherein querying at least one memory device to read a device ID and/or manufacturer code stored in the Flash memory device to discover the memory type further comprises querying a protection register of the Flash memory device.
- 51. (Currently Amended) The machine-usable medium of claim 48, wherein querying at least one memory device to read a device ID and/or manufacturer code stored in the Flash memory device to discover the memory type further comprises querying a memory ID stored in the array of the Flash memory device.
- 52. (Currently Amended) The machine-usable medium of claim 48, wherein querying at least one memory device to read a device ID and/or manufacturer code stored in the Flash memory device to discover the memory type further comprises querying a common Flash interface (CFI) of the Flash memory device.
- (Currently Amended) A system comprising:
 at least one Flash memory device; and
 - a host coupled to the at least one Flash memory device, wherein the host comprises a means for detecting a Flash memory type of the at least one Flash memory device by reading a memory ID code stored in the Flash memory device and comprises a means for configuring a driver to access the at least one Flash memory device in response to the Flash memory type detected by the means for detecting.